Petr Stepanov

UI/UX designer. Frontend and desktop developer.

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Summary

Ph.D. graduate in physics with 5+ year expertise in user interface (UI) and user experience (UX) design. Strong web application and desktop software development skills. Seeking to apply for a position in the industry. Authorized to work in the US on Optional Practical Training (OPT expires February 2023). Will consider visa sponsorship offers.

Computer Skills

Essentials. Git, SVN, SSH, Linux, and Terminal usage. BASH scripting. IDEs: Eclipse, Xcode, Visual Studio Code (VS Code). Project Management: JIRA, Trello.

Desktop. C/C++ and frameworks: Qt, Fox, CERN ROOT, Geant4. Building from source: GNU make, CMake. Java and Swing. Python.

Frontend. HTML and CSS (LESS, SASS), Bootstrap, responsive web design, JavaScript and jQuery, npm, gulp, Google Web Toolkit (GWT), AngularJS, React.js, and Backbone.js.

Backend. Java, Node.js, EJS.

UI/UX design. Figma, Sketch, InVision Studio, Adobe XD, Adobe Photoshop, Adobe Illustrator, Inkscape, Blasamiq, Blender.

Apple iOS. Fundamental Swift skills. User interface development with UIkit and storyboards.

Work Experience

C++ Software Developer

Thomas Jefferson National Laboratory (JLab), Newport News, VA, USA.   July 2020 - Current

- Applied CERN ROOT framework (C++) to perform statistical analysis of a significant amount (over 100 GB) of the raw experimental data of the Kaon LT experiment at JLab. Link to GitHub.
- Utilized SLURM environment on JLab supercomputer environment to run resourceful particle simulations on multiple computing nodes at the same time. This decreased the wall computation time by more than 10 times.
- Proposed and implemented RAMDisk functionality on the development environment. This lead to an over 60% increase in source code indexing time.
- Set up data acquisition system that performs triggered waveform acquisition from Tektronix oscilloscope to a local Network Attached Storage (NAS) device. RedHat, Ethernet, SAMBA, Python, National Instruments VISA library.
- Active collaborator of the Pion LT project. Committed more than 50 shifts performing Target Operator and Shift Leader duties in the experimental Hall C counting room.

Software Developer (Postdoc)

Catholic University of America (CUA), Washington, DC, USA.   July 2020 - Current

- Applied Machine Learning (ML) TMVA framework to perform binary classification of thousands of signals from a data acquisition (DAQ) setup. Link to GitHub.
- Developed a computer simulation based on the Geant4 framework (C++, CMake, Eclipse IDE, gdb) to study optical properties of a novel scintillation material to be used in the EIC detector system. Link to GitHub.
- Teaching experience: mentoring students within a 3-month Research Experiences for Undergraduates (REU) program at the Physics Department at CUA. Giving talks and presentations about Linux Terminal, and supercomputer environment.
- Enhanced debugging of the core library source code lead to opening more than 10 bug reports on the ROOT (C++) forum.

Software Developer (Research Assistant)

Bowling Green State University (BGSU), Bowling Green, OH, USA.   August 2014 - May 2020

- Applied ROOT C++ libraries to write three GUI open-source software for scientific data interpretation.
  - GitHub repositories contain over 10k lines of code in total: TLIST Processor, SW Calculator, RooPositron.
  - Technologies used: CMake, C++, ROOT, Fox GUI and RooFit libraries.
  - Extended default ROOT GUI library (Qt-based) to support the MVP design pattern.

- Wrote a GUI application [LuminApp](#) (Java, Swing) to parse and merge time-stamped data from optical spectrometer and thermometer. This increased data processing time by two orders of magnitude.
- Developed static website (Hexo, Gulp, Bootstrap) and visual identity for the [SelimLab](#) research group. Website has a 99% Google performance rank and features 700 ms time to interactive metrics.
- Maintained local Apache HTTP server [physics.bgsu.edu](#) hosting over 10 websites at the BGSU.
- Created website for the [ICPA-18](#) international conference with registration (over 150 users) and payment system workflow (WordPress, PHP, Recurly.js), and [landing pages](#) for events.

UI/UX Designer, Frontend Developer (Frelance)   September 2012 - Current

- Designed and built online e-commerce store [Sticker Store LLC](#) with static website generator (Figma, Hexo, Snipcart, Bootstrap, SASS, EJS, Node.js).
  - Improved the Google PageSpeed Insights metrics (CLS, LCP) up to 97%.
  - Created a recursive script to export over 300 products from YAML file to Google Merchant.
  - Optimized SEO. Project reached over 1400 organic monthly users.
- Made iOS application (Swift, UIkit, storyboards) for the [We.Team](#) messenger (more than 3k monthly downloads in AppStore). Participated in cloud-based messenger development with enhanced file sharing capabilities (HTML, React JS, SASS).
- Migrated the landing page for [Sweetbridge](#) company from WordPress to Jekyll static site generator (Ruby, CSS). This resulted in a 70% improvement in the page load time.
- Developed the front-end part (Angular.js, HTML, LESS) for [Lili Social](#) network.
  - Assisted with iOS mobile application (Ionic).
  - Enabled SEO crawling of over 1000 Angular.js pages with Google bot.
- Web design.
  - Designed logos, UI/UX prototypes (Figma, Sketch, Illustrator) and branding identity for over [10 different companies](#).
  - Converted numerous design assets and mockups into responsive HTML and CSS.
  - Mocked up and integrated dozens of cross-browser responsive email templates.

Web Designer, Full Stack Web Developer

[Gridnine Systems](#), Moscow, Russia.   April 2011 - August 2014

- Prototyped and designed interactive mockups for [Otixo](#) cloud file integrator (Balsamiq, Adobe Creative Suite). Utilized Google Web Toolkit (GWT) Model-View-Presenter (MVP) framework to develop application frontend (JavaScript, responsive CSS).
- Responsible for the front-end development of the [ATH American Express](#) – the largest travel management company in Russia (JavaScript, Backbone.js, and RequireJS). Increased the front-end load time by over 30%.
- Implemented image processing servlets on the backend to generate banners for five different social networks (PHP, ImageMagic).
- Wireframed and sliced to web pages numerous UI/UX mockups for web applications (Balsamiq, Photoshop, HTML and CSS).

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